

## Shaper Cutter Ø178 Z31

A12-210

To achieve an excellent surface finish - Ra less than 0.2 - , a roughing and finishing wheel is used. In function of the diameter of the tool 200 to 500 rpm are needed for the face grinding, which requires a fast A-Axis.



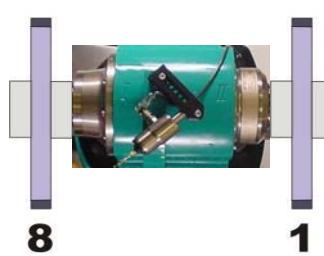
### 1. Cycletime for Resharpening

Tool specifications					
Diameter 178 mm, Z 31, Grinding Length 35 mm					
Material HSS					
Operations					
Feed [mm/Min]	2000	150	180	150	200
Power [kW]		4	2	2	1
Cutting feed [m/s]		18	16	32	24
Used wheels					
Grinding time [s]	23	112	499	112	131
Total cycle time	14 Min 37				

The mentioned cycle times are indicative. The material to be ground, different grinding wheels or other coolants can influence the cycle times considerably.

### 2. Used Grinding Wheels

8	1A1 Ø150 C120
1	1A1 Ø150 C180



### 3. Machine and Software Requirements

Machines: 5 axes CNC grinders : GEMINI DMR, Dressing Unit, A-Rapid  
Control: Fanuc 31i  
Coolant: Synthetic Oil, pressure 6 bar  
Software: Quinto 5

responsible engineer: OP,9.4.09

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J. SCHNEEBERGER Maschinen AG 4914 Roggwil Switzerland

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